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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,489	07/18/2003	Robert Louis Cobene II	100110643	2048

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EXAMINER

GOFF II, JOHN L

ART UNIT PAPER NUMBER

1733

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/621,489

Applicant(s)

COBENE, ROBERT LOUIS

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 1-25 and 36-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 1/27/06.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The indicated allowability of claims 30 and 31 is withdrawn in view of the newly discovered reference(s) to Yenni et al. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

4. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka (U.S. Patent 6,024,525) in view of Boss (U.S. Pre-Grant Publication 2001/0019691).

Yamanaka discloses a method of binding a plurality of sheets to form a book-like structure using a clamping apparatus. Yamanaka teaches the method comprises providing an assembly of plural sheets (307 of Figure 2A), providing a hot melt adhesive sheet (T of Figure 1), providing a pair of translating clamping jaws comprising a press (730 of Figure 1) and a clamping body (702 and 703 of Figure 1), displacing the clamping jaws a distance greater than the thickness of the assembly of plural sheets, translating a platen (701 of Figure 1) to contact the hot melt adhesive sheet and pre-heat the hot melt adhesive sheet, contacting the pre-heated hot melt adhesive sheet to a spine surface of the assembly of plural sheets wherein at least one end portion of the sheet protrudes past the spine surface and forms an angle with a plane surface of at least one sheet of the assembly of plural sheets, translating the clamping jaws to apply pressure to the planar surface of the assembly of plural sheets such that the protruding end portion of the

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hot melt adhesive sheet is between the clamping jaws and the assembly of plural sheets and redirected to the planar surface of the assembly of plural sheets, and continually applying heat to the clamping bodies to melt the hot melt adhesive sheet to flow the adhesive into at least a portion of the assembly of plural sheets and form the book-like structure after cooling (Column 4, lines 51-67 and Column 5, lines 41-53). Yamanaka is silent as to including within the clamping jaws (e.g. between the clamping body and press) an active cooling member. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within the clamping jaws (e.g. between the clamping body and press) taught by Yamanaka an active cooling member such as an actively cooled heat sink as was known in the art as shown by Boss to allow rapid heating and cooling of the assembly, and thus, decrease the time required for binding.

Boss discloses a method of binding a plurality of sheets to form a book-like structure using a clamping apparatus. Boss teaches the method comprises providing an assembly of plural sheets (14 of Figure 2) including an adhesive portion along the spine and planar surface of the assembly (12 of Figure 2), providing a clamping jaw (22 of Figure 2) comprising a press (26 of Figure 2), an actively cooled heat sink (30 of Figure 2), and a clamping body (28 of Figure 2), displacing the clamping jaw at a distance greater than the thickness of the assembly of plural sheets, translating the clamping jaw to apply pressure to the planar surface of the assembly of plural sheets, applying heat to the clamping body to melt the adhesive, and then withdrawing heat from the assembly of plural sheets and the clamping body through the actively cooled heat sink to form the book-like structure (Figure 2 and Paragraph 17). Boss teaches including the

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actively cooled heat sink within the clamping jaw allows rapid heating and cooling of the assembly of plural sheets and clamping body (Paragraph 17).

Regarding the limitation of removing heat to below the glass transition temperature, it is noted cooling is performed such that the book-like structure is dimensionally stable, i.e. the adhesive is hardened, such that it appears this limitation is met. In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine the amount of heat removed as a function of the dimensional stability of the book-like structure as doing so would have required nothing more than ordinary skill and routine experimentation.

5. Claims 29-31, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka and Boss as applied to claims 26-28 above, and further in view of Yenni et al. (U.S. Patent 6,090,728).

Yamanaka and Boss as applied above teach all of the limitations in claims 29-31, 34, and 35 except for a teaching of the pre-heating of the hot melt adhesive sheet occurring to above the softening point and glass transition temperature of the hot melt adhesive sheet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the pre-heating in Yamanaka as modified by Boss to above the softening point of the hot melt adhesive sheet as it is well known in the bonding art that heating an adhesive sheet such that it is soft and pliable (and thus capable of being redirected to the planar surface of the assembly of plural sheets as taught by Boss) includes heating to above the softening point and glass transition temperature as shown for example by Yenni et al.

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Yenni et al. are exemplary in the bonding art of heating a polymer to above its softening point wherein the definition of the term “softening point” for the polymer is associated with its glass transition temperature above which the adhesive become soft and pliable (Column 5, lines 58-60).

Regarding claim 35, Yamanaka does not specifically disclose contacting the platens and clamping jaws with the hot melt adhesive sheet simultaneously. However, the apparatus of Yamanaka is capable of doing so such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include in Yamanaka as modified by Boss and Yenni et al. contacting the platen and clamping jaws with the hot melt adhesive sheet simultaneously as only the expected results of reducing the bonding time would be achieved.

6. Claims 29, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka and Boss as applied to claims 26-28 above, and further in view of Kuramoto et al. (U.S. Pre-Grant Publication 2002/006 4437).

Yamanaka and Boss as applied above teach all of the limitations in claims 29, 32, and 33 except for a teaching of pre-heating of the hot melt adhesive sheet occurring to above the softening point of the hot melt adhesive sheet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the pre-heating in Yamanaka as modified by Boss to above the softening point of the hot melt adhesive sheet at least in discrete points to tack the hot melt adhesive sheet to the spine of the assembly of plural sheets and prevent the hot melt adhesive sheet from displacing during clamping and bonding as was known in the art and shown for example by Kuramoto et al.

Kuramoto et al. disclose a method of binding a plurality of sheets to form a book-like structure using a clamping apparatus. Kuramoto et al. teach the method comprises providing an assembly of plural sheets, contacting a hot melt adhesive sheet to a spine surface of the assembly of plural sheets, softening the hot melt adhesive sheet at discrete points to tack the hot melt adhesive sheet to the spine to prevent displacement of the hot melt adhesive sheet during subsequent processing steps, and then bonding the hot melt adhesive sheet to the spine using a clamping apparatus including an active cooling means to form the book-like structure (Paragraphs 47, 49, and 50).

Response to Arguments

7. Applicant's arguments with respect to claims 26-35 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues, "There is no teaching or suggestion provided by either the Yamanaka patent or the Boss patent as to how the relatively large thermal mass of heat sink 30 disclosed in the Boss patent, and relied upon by the Examiner, would have been integrated into the shift member 730 and/or side heaters 702/703 of the Yamanaka patent."

As noted in the rejection, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include within the clamping jaws (e.g. between the clamping body and press) taught by Yamanaka an active cooling member such as an actively cooled heat sink as was known in the art as shown by Boss to allow rapid heating and cooling of the assembly, and thus, decrease the time required for binding. One of ordinary skill in the art

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would clearly have included in Yamanaka the active cooling member in a like/analogous manner as that taught by Boss.

Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John L. Goff



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